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ABSTRACT

In spring 1986, new citywide testing programs in both reading and mathematics were implemented by the New York City Board of Education. In those cases where the test had changed, it was necessary to statistically equate the new tests to the old tests, so that comparisons of equated rather than actual scores could be made during the transitional year. Tables show the battery of reading and mathematics tests administered in spring 1985 and spring 1986, for grades 2-12. In reading, tables were constructed for grades 3-11 by the equipercentile method to equate scores on the California Achievement Tests, the Degrees of Reading Power Test, and the Comprehensive Tests of Basic Skills (the latter for grade 10 only). Time of test administration determined which served as pretest or posttest. In mathematics, the equipercentile method was applied at grade 9 to equate the New York State Regents Competency Test to the New York City Mathematics Test (NYCMT). For grades 3-8, tables equating the NYCMT and the Metropolitan Achievement Test were generated by the Rasch model from 1985 pilot data sampling nine elementary and eight junior high schools. (Equipercentile and cross-grade comparisons are also shown.) All equating tables are provided in the appendices. (LPG)

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Equating of 1985 to 1986
Citywide Reading and
Mathematics Tests

OEA R & D Report

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New York City Board of Education
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Research Report
Office of Educational Assessment
Research and Development Section
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May 1986

Equating of 1985 to 1986 Citywide Reading and Mathematics Tests

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INTRODUCTION

The New York City Board of Education administers two major citywide testing programs every spring -- one in reading and one in mathematics. In addition to the citywide tests, state reading and mathematics tests are also administered at a number of grades. This spring, 1986, new citywide testing programs in both reading and mathematics are being implemented. State tests will continue to be given; in reading, however, for the first time, the state test will also serve as the citywide test at the grades in which it is given.

For many reasons, comparisons need to be made between student achievement in 1985 and 1986 despite the fact that in many cases the actual tests being administered have changed. In those cases where the same test series will be administered in both years, comparisons can readily be made. In those cases, however, where the test has changed, it was necessary to statistically equate the new tests to the old tests, so that comparisons of equated rather than actual scores can be made during the transitional year.

The remainder of this report outlines the 1985 and 1986 testing programs in reading and mathematics, describes the methodology used to equate the new tests to the old, makes recommendations regarding which equating table(s) to use for which grade(s) and purpose(s), and provides all necessary equating tables.

EQUATING OF CITYWIDE READING TESTS

Overview

The citywide reading testing program in the spring, 1986 differs from the spring, 1985 testing program. Table 1 outlines both programs. As Table 1 indicates, the 1985 testing program included the California Achievement Test (CAT) - Form D at grades 2-9 in the districts, and either the CAT-D or the Comprehensive Test of Basic Skills (C.T.B.S.) - Form S in the high schools. In addition, state reading tests from the Degrees of Reading Power (D.R.P.) test series were given citywide in grades 3, 6, 8, 11, and 12. (The D.R.P. was also given citywide in grades 4 and 7 for promotional policy purposes.)

In 1986, the D.R.P. is the citywide reading test for grades 3-12. The state D.R.P. tests administered as part of the state program will continue to be given at grades 3, 6, 8, 11, and 12, and will serve to satisfy both state and city assessment purposes. Other forms of the D.R.P. will be administered at grades 4, 5, 7, 9, and 10 in order to complete an articulated citywide program. The Metropolitan Achievement Test (MAT) - Form L will be administered at grade 2, where the D.R.P. is not available; at grade 3 for transitional purposes; and at grades 4 and 7 for promotional policy purposes. (Please note that Table 1 is set up so that it is easy to see which tests were taken by students in this year's grades last year; for example, tests administered to kindergarten students in 1985 are aligned with tests given to those same students, now first graders, in 1986 and so on.)

Table 1

New York City's Citywide Testing Program
in Reading
Spring, 1985 and Spring, 1986

Spring, 1985		Spring, 1986	
Grade	Test	Grade	Test
-	-	K	-
K	-	1	-
1	-	2	MAT
2	CAT	3	MAT D.R.P. (PEP)
3	CAT D.R.P. (PEP)	4	MAT D.R.P.
4	CAT D.R.P.	5	D.R.P.
5	CAT	6	D.R.P. (PEP)
6	CAT D.R.P. (PEP)	7	MAT D.R.P.
7	CAT D.R.P.	8	D.R.P. (PCT)
8	CAT D.R.P. (PCT)	9 (jr. high) and high school)	D.R.P.[1]
9 (jr.high) 9 (high sch.)	CAT C.T.B.S.[1]	10	D.R.P.[1]
10	CAT[1]	11	D.R.P. (RCT)[1]
11	C.T.B.S.[1] D.R.P. (RCT)	12	D.R.P. (RCT)[1]
12	CAT[1] D.R.P. (RCT)[1,2]		

CAT - California Achievement Test

D.R.P. - Degress of Reading Power Test

PEP - New York State Pupil Evaluation Program (New York State Test)

PCT - New York State Preliminary Competency Test (New York State Test)

C.T.B.S. - Comprehensive Test of Basic Skills

RCT - New York State Regents Competency Test (New York State Test)

MAT - Metropolitan Achievement Test

[1] Students in grades 9-12 in high schools also took a citywide reading test in the fall -- the Comprehensive Test of Basic Skills in grades 9 and 11, and the California Achievement Test in grades 10 and 12.

[2] This test is only taken by those who have not yet passed the R.C.T.

To compare 1986 results with 1985 results, the following procedures may be used.

1. In those grades where the D.R.P. is being given in 1986 and where students took the D.R.P. in 1985, actual D.R.P. scores from 1985 and 1986 may be compared. (This applies to students in grades 4, 5, 7, 8, 9, and 12 in 1985-86.) This procedure requires no conversions; however it does require having scores from last year's D.R.P. administrations readily available. (Any of the D.R.P. unit scores can be used to make D.R.P. results comparable from form to form of the D.R.P. series.)

2. In those same grades (i.e., grades 4, 5, 7, 8, 9, and 12 in 1985-86), where spring, 1985 D.R.P. scores are not readily available, or where matching spring, 1985 with spring, 1986 D.R.P. scores is problematic, conversion tables can be used to convert spring, 1985 CAT scores into D.R.P. scores.

3. In those grades where the D.R.P. is being given in 1986 and where students did <u>not</u> take the D.R.P. in 1985, (i.e., grades 3, 6, 10, and 11 in 1985-86) either the 1985 or 1986 scores must be converted before comparisons may be made.

In grades 3 and 6, 1986 D.R.P. scores should be converted to CAT scores and used as posttest scores. In grades 10 and 11, 1985 CAT or C.T.B.S. scores may be converted to D.R.P. scores and used as pretest scores.

The methodology used to derive the equating tables described, and the rationale for the recommendations will be described in the following section.

Methodology

The method used to generate the equating tables described above was the equipercentile method. In each case, the two tests to be equated were administered to the same basic group of students, frequency distributions of the scores on both tests were generated, and the scores were equated by O.E.A.

Table 2 indicates which equating tables should be used for each grade, and summarizes some characteristics of the samples and tests used to generate those tables. Specifically, for each grade 3-11, the table specifies the grade level of the students in the equating data base; the table to be used; and the form, level, time of administration, and number of students in the data base used to equate the two tests.

In almost all cases (with the exception of grade 10 in the high schools), the equating tables were generated using citywide data. This was done in order to ensure the most accurate equating results. The equating tables for grades 3, 4, 5, 6, 7, 8, 9, 10 (j.h.) and 11 were all generated using citywide data.

In general, the tables require converting 1985 CAT scores into D.R.P. scores and using these scores as pretest scores. In two grades, 3 and 6, 1985 CAT scores cannot as readily be converted to D.R.P. scores. In third grade this is because it is not possible to meaningfully convert second grade CAT scores to D.R.P. scores, due to the fact that the D.R.P. does not exist below grade three; in grade six it is not possible because citywide data on the D.R.P. and the CAT at grade five, the pretest year, does not exist. At these two grades only (3 and 6) it is necessary to convert 1986 D.R.P. scores into CAT scores and use them as posttest scores.

Table 2

Characteristics of Samples and Tests
Used to Generate Selected Reading Equating Tables

Grade(s) In 1985-86 For Which Table Can Be Used	Grade of Students in Equating Data Base	Equating Table	Test: Degrees of Reading Power (D.R.P.) Form	Level	Time of Admin.	Number of Students Included in Data Base	Test: California Achievement Test (CAT)/ (Comprehensive Test of Basic Skills (C.T.B.S.)) Form	Level	Time of Admin.	Number of Students Included in Data Base
3	3	DRP-CAT	PEP-R	3	May,1985	60,735	C	13	April,1985	63,338
4	3	CAT-DRP	PEP-R	3	May,1985	60,735	C	13	April,1985	63,338
5	4	CAT-DRP	PA	8	May, 1985	61,458	D	14	April,1985	63,449
6	6	DRP-CAT	PEP-E	6	May,1985	57,236	D	16	April,1985	59,767
7	6	CAT-DRP	PEP-E	6	May,1985	57,236	D	16	April,1985	59,767
8	7	CAT-DRP	PA	4	May,1985	60,037	D	17	April,1985	63,567
9,10[a],11	8[b]	CAT-DRP	PCT-C	8	May,1985	58,158	D	18	April,1985	62,296
10[c]	9	CTBS-DRP	PCT-A	8	May,1981	1,200	(S)	3	May,1981	1,200

[a] For grade 10 students who attended junior high schools and have grade 9 CAT scores.

[b] This table is based on D.R.P. and CAT tests administered to grade 8 students since the CAT level administered as a pretest for these three grades was the same and since the D.R.P. unit score, the metric used, can be used at different test levels.

[c] For grade 10 students who attended grade 9 in high school and have grade 9 C.T.B.S. scores.

One table was not generated using citywide data for the following reasons. The table to be used with tenth graders who attended ninth grade in a high school was based on data from a spring, 1981 pilot study done in New York City.* Data from the pilot study were used because at no other time in New York City were the D.R.P. and the CAT administered concurrently to ninth grade students.

(See Appendix A for all the reading equating tables just described.)

*This pilot study was part of a series of studies undertaken by the New York City Board of Education during 1981 and 1982 to ascertain relationships between the D.R.P. and citywide reading tests.

EQUATING OF CITYWIDE MATHEMATICS TESTS

Overview

The citywide mathematics testing program in the spring, 1986 also differs from the spring, 1985 program. Table 3 outlines both programs. As Table 3 indicates, the 1985 testing program included the New York City Mathematics Test (N.Y.C.M.T.), a version of the Stanford Diagnostic Mathematics Test, at grades 2-9 in the districts, and the Stanford Test of Academic Skills (TASK) in the high schools. In addition, a state mathematics test, the Regents Competency Test (RCT), was given citywide in grade 9, and continually in later grades to those students who did not pass the test. (A state mathematics test was also given citywide in grades 3 and 6 but is not included or discussed in this report since it may not readily be used in conjunction with citywide tests for evaluation purposes.)

In 1986, the Metropolitan Achievement Test (MAT) is the citywide mathematics test at grades 2-9, and the R.C.T. in mathematics will serve as the citywide mathematics test in the high schools. (High school students will of course also continue to take Regents exams and end-of-year exams; these are not discussed in this report.)

To compare 1986 results with 1985 results, the following procedures may be used.

1. In those grades where the MAT is being given in 1986 and whose students took the N.Y.C.M.T. in 1985, 1985 N.Y.C.M.T. scores must be converted to MAT and used as pretest scores using the tables provided. (This applies to students in grades 3, 4, 5, 6, 7, and 8 in 1985-86).

Table 3

New York City's Citywide Testing Program
in Mathematics
Spring, 1985 and Spring, 1986

Spring, 1985		Spring, 1986	
Grade	Test	Grade	Test
-	-	K	-
K	-	1	-
1	-	2	MAT
2	NYCMT	3	MAT PEP -- Mathematics
3	NYCMT PEP -- Mathematics	4	MAT
4	NYCMT	5	MAT
5	NYCMT	6	MAT PEP -- Mathematics
6	NYCMT PEP -- Mathematics	7	MAT
7	NYCMT	8	MAT
8	NYCMT	9 (jr. high and high school)	RCT -- Mathematics
9 (jr. high)	NYCMT RCT -- Mathematics	10	RCT -- Mathematics
9 (high school)	TASK RCT -- Mathematics[1]		
10	TASK RCT -- Mathematics[1,2]	11	RCT -- Mathematics
11	TASK RCT -- Mathematics[1,2]	12	RCT -- Mathematics
12	TASK RCT -- Mathematics[1,2]		

NYCMT - New York City Mathematics Test

PEP - New York State Pupil Evaluation Program

RCT - New York State Regents Competency Test

TASK - Stanford Test of Academic Skills

MAT - Metropolitan Achievement Test

[1] Students in grades 9-12 in high schools also took a citywide mathematics test in the fall -- the Stanford Test of Academic Skills in gra des 9-12.

[2] This test is only taken by those who have not yet passed the R.C.T.

2. In grade 9, where students are taking the R.C.T. in 1986 and have previous N.Y.C.M.T. scores, the 1986 R.C.T. scores must be converted to N.Y.C.M.T. scores and used as a posttest.

3. In grades 10-12, students in funded programs should have both 1986 and 1985 R.C.T. scores. These scores should be used as pretest and post-test scores for evaluation purposes.

The methodology used to derive the equating tables described, and the rationale for the recommendations will be described in the following section.

Methodology

Equating tables for grades 3-8 were generated using Rasch model methodology, that is, items from both tests were placed on the same Rasch scale and total test scores were equated. The publisher of the N.Y.C.M.T. and the MAT, The Psychological Corporation, did the equating and produced the tables as a requirement of the test selection process.

The method used to generate the equating table for grade 9 was the equipercentile method. In each case, the two tests to be equated were administered to the same group of students, frequency distributions of the scores on both tests were generated, and the scores were equated by O.E.A.

The six N.Y.C.M.T.-MAT tables to be used with grades 3-8, were generated using data from a spring, 1985 New York City pilot study. The pilot study was conducted as part of the citywide test selection process for new mathematics and reading tests; one major purpose of the study was to equate results from the old tests to results of the tests under consideration. The sample selected to equate the N.Y.C.M.T. with the MAT at grades 3-8

consisted of nine elementary schools and eight junior high schools. At each level (elementary and junior high), the schools were selected to obtain a basically rectangular distribution of scores, rather than a normal distribution, in order to ensure adequate numbers of students at the low and high ends of the distribution for equating purposes.

Schools were selected according to stratified random sampling procedures from districts that agreed to participate.* The stratifying variable was achievement, as measured by the percent of students reading at and above grade level in the school.** The three levels of the achievement variable were "low" (about 25 percent to 35 percent reading at or above grade level), "medium" (about 36 percent to 74 percent) and "high" (75 percent to 88 percent). (The very lowest and highest achieving schools were not selected.)

The N.Y.C.M.T.-MAT sample consisted of nine elementary schools (2 low, 4 medium, 3 high) and eight junior high schools (3 low, 2 medium, 3 high). Each school tested two classes representative of their school at each grade level. They administered both tests to each class within a week's time. The order of administration was not counterbalanced.

Table 4 indicates which equating tables should be used for each grade, and summarizes some characteristics of the samples and tests used to generate these tables. For each grade, 3-9, the table specifies the grade

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*About two-thirds of the city's districts agreed to participate in the overall pilot of two reading and two mathematics tests. These districts covered the range of achievement in the city.

**Reading achievement was used to generate both reading and mathematics samples since it was considered an adequate measure of general achievement for the purposes of the study and for logistical reasons since all four samples were being selected simultaneously.

Table 4

Characteristics of Samples and Tests
Used to Generate Selected Mathematics Equating Tables

Grade in 1985-86 For Which Table Can Be Used	Grade of Students in Equating Sample	Equating Table	Test: New York City Mathematics Test (NYCMT) Form	Level	Time of Admin.	Number of Students in Equating Sample	Test: Metropolitan Achievement Test (MAT)/ (Regents Competency Test (R.C.T.)) Form	Level	Time of Admin.	Number of Students in Equating Sample
3	2	NYCMT-MAT	E	2	April,1985	405	L	Pri.I	April,1985	405
4	3	NYCMT-MAT	E	3	April,1985	419	L	Pri.II	April,1985	419
5	4	NYCMT-MAT	E	4	April,1985	411	L	Elem.	April,1985	411
6	5	NYCMT-MAT	E	5	April,1985	411	L	Int.	April,1985	411
7	6	NYCMT-MAT	E	6	April,1985	437	L	Int.	April,1985	437
8	7	NYCMT-MAT	E	7	April,1985	312	L	Adv.	April,1985	312
9	9	RCT-NYCMT	E	9	April,1985		(Spr.'85)	9	April,1985	

level of the students in the sample; the table to be used; and the form, level, time of administration, and number of students in the sample.

Since these equating tables were generated using much smaller samples than the reading equating tables, the equating tables were checked in several ways. The results of procedures used to evaluate the equating tables are described below; an analysis of these results indicated that the equating was adequate.

First, the publisher compared the Rasch model equating tables for grades 3-8 to tables generated for the same grades using the equipercentile method. The two methods yielded results that were very similar, indicating that the Rasch procedure used yielded adequate results despite the relatively small samples. (See Table 5 for a summary of the results of both procedures.)

Second, in those grades where similar* levels of each test were given (namely, 3 and 4; 5 and 6; 7, 8, and 9) O.E.A. compared the equating tables, which had been generated separately for each grade, since the relationship between two tests should not change as a function of grade. When results were compared, they were almost identical, giving further evidence of the adequacy of the equating tables produced for each grade. (See Tables 6, 7, and 8 for graphs which show the similarity of results yielded regardless of grade.)

(See Appendix B for all the mathematics equating tables just described.)

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*Since the N.Y.C.M.T. is a customized version of the S.D.M.T., there are grade to grade variations that do not exist on the original S.D.M.T.

Table 5

A Comparison of Equating Results for the N.Y.C.M.T. and MAT Obtained from the Rasch and the Equipercentile Equating Procedures

	N.Y.C.M.T. Total Mathematics Raw Score	Equated MAT-6 Total Mathematics Raw Score	
	(at selected percentile rank points)	Equipercentile Method	Rasch Method
	Level 2	Primary I	
10	59	53	52
25	70	61	60
50	77	67	65
75	84	71	70
90	88	74	74
Mean	75	65	64
	Level 3	Primary 2	
10	53	52	51
25	69	60	60
50	86	70	69
75	97	76	75
90	103	79	78
Mean	81	67	67
	Level 4	Elementary	
10	59	48	46
25	72	58	56
50	89	68	70
75	101	78	82
90	106	86	88
Mean	85	67	67

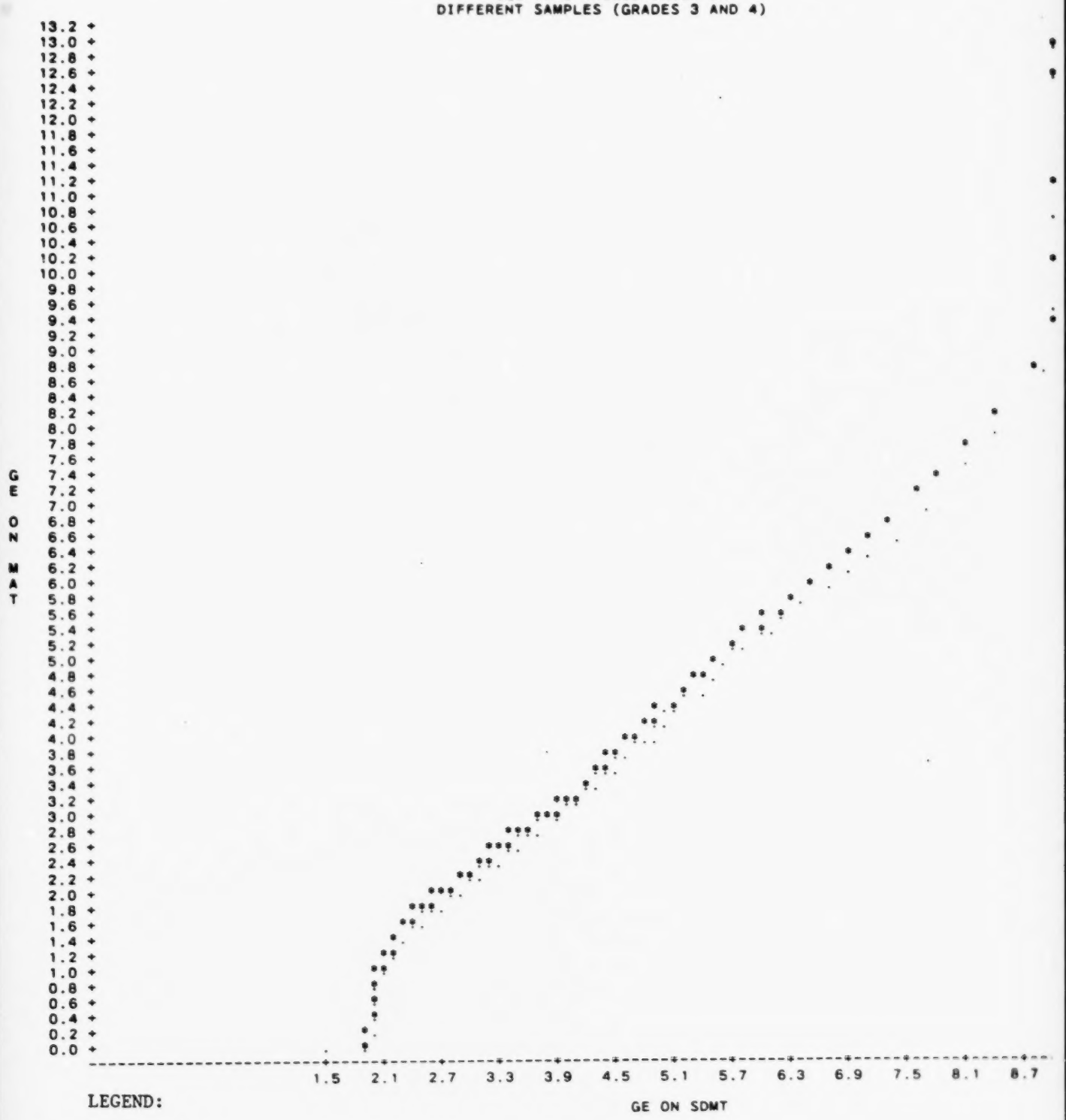
Table 5 (continued)

A Comparison of Equating Results for the N.Y.C.M.T. and MAT Obtained from the Rasch and the Equipercentile Equating Procedures

	N.Y.C.M.T. Total Mathematics Raw Score	Equated MAT-6 Total Mathematics Raw Score	
	(at selected percentile rank points)	Equipercentile Method	Rasch Method
	Level 5	Intermediate	
10	42	40	36
25	60	51	49
50	79	62	63
75	93	71	74
90	103	80	82
Mean	76	61	61
	Level 6	Intermediate	
10	55	53	51
25	69	61	61
50	85	73	72
75	98	79	81
90	106	86	87
Mean	82	70	70
	Level 7	Advanced 1	
10	45	38	37
25	54	44	44
50	65	52	52
75	74	61	61
90	83	66	67
Mean	64	52	52

TABLE 6

COMPARISON OF TWO MAT (ELEM.) - NYCMT (GR. 3/4)
EQUATING TABLES BASED ON
DIFFERENT SAMPLES (GRADES 3 AND 4)

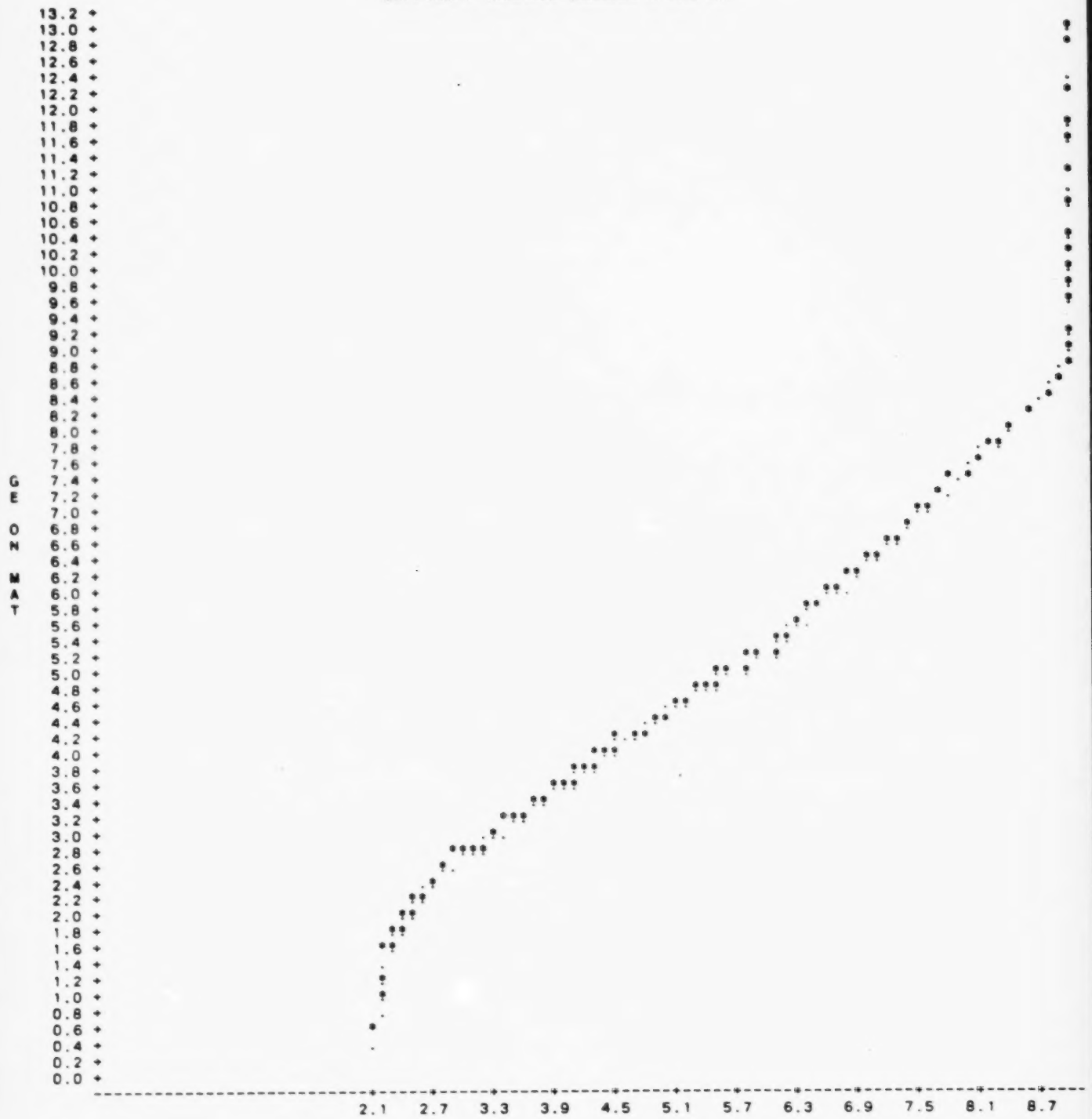


LEGEND:

Grade 3 is .
Grade 4 is *

TABLE 7

COMPARISON OF TWO MAT (INT.) - NVCMT (GR. 5/6)
EQUATING TABLES BASED ON
DIFFERENT SAMPLES (GRADES 5 AND 6)

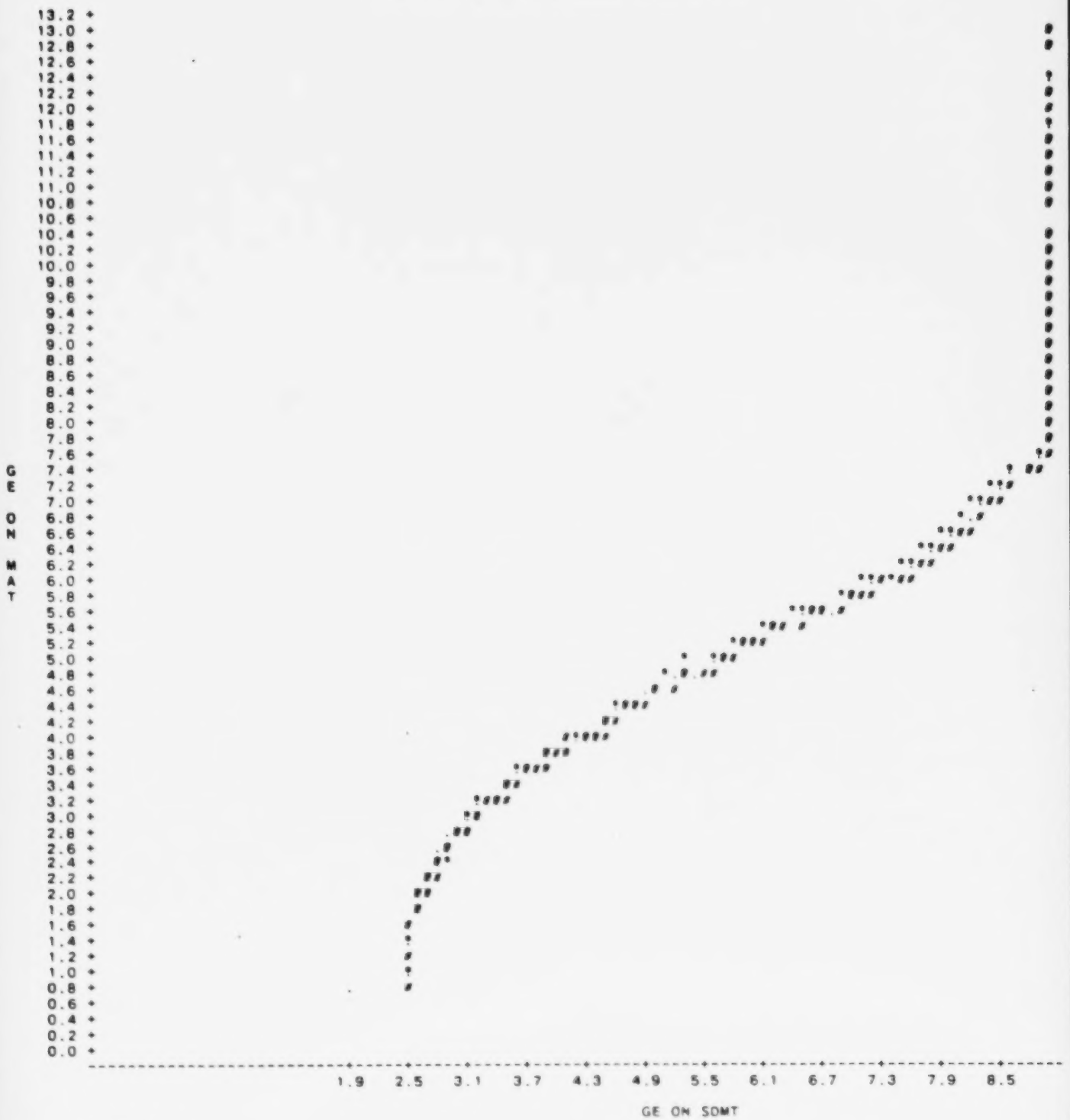


LEGEND:

Grade 5 is .
Grade 6 is *

TABLE 8

COMPARISON OF THREE MAT (ADVANCED 1) - NYCMT (GR. 7/8/9)
EQUATING TABLES BASED ON
DIFFERENT SAMPLES (GRADES 7, 8, AND 9)



LEGEND:

Grade 7 is .
Grade 8 is *
Grade 9 is #

SUMMARY

The Office of Educational Assessment developed equating tables to enable those who use test results to make comparisons between student achievement in 1985 and 1986, despite the fact that the citywide reading and mathematics testing programs have changed.

The tables should be used primarily for making comparisons between groups of students, e.g., for evaluating funded programs. They should not be used to compare individual students' achievement levels from year to year.

The tables are intended for use during the transitional year between the old and new citywide testing programs; once the transition has been made, actual test scores, rather than equated test scores, should be used.

TABLE 1
READING

Conversion Table for Evaluating
1985-1986 Grade 3 Programs*

DRP (PEP-R)			CAT D (LEVEL 13)		
Raw Score	Spr, Gr 3 Percentile Rank	NCE	Raw Score	Spr, Gr 3 Percentile Rank	NCE
0	1	1	0	1	1
1	1	1	11	1	1
2	2	7	12	1	1
3	2	7	13	1	1
4	3	10	14	1	1
5	3	10	15	1	1
6	4	13	16	1	1
7	5	13	17	1	1
8	6	17	19	2	7
9	7	19	21	3	10
10	8	20	23	5	15
11	8	20	25	6	17
12	9	22	27	8	20
13	10	23	29	10	23
14	13	26	31	12	25
15	15	28	33	15	28
16	17	30	35	17	30
17	18	31	37	20	32
18	20	32	39	22	34
19	23	34	40	23	34
20	26	37	41	25	36
21	29	38	43	28	38
22	30	39	45	31	40
23	35	42	46	33	41
24	37	43	48	36	42
25	37	43	49	38	44
26	40	45	51	41	45
27	44	47	52	43	46
28	47	48	54	47	48
29	50	50	55	49	49
30	54	52	56	51	51
31	55	53	58	55	53
32	56	53	59	58	54
33	60	55	60	60	55
34	64	58	61	62	56
35	66	59	62	65	58
36	70	61	63	68	60
37	73	63	64	71	62
38	75	64	65	75	64

TABLE 1
READING (Cont'd)

39	77	66	65	75	64
40	78	66	66	78	66
41	80	68	67	82	69
42	82	69	67	82	69
43	85	72	68	86	73
44	87	74	69	90	77
45	88	75	69	90	77
46	90+	78+	70	94	83
47	90+	78+	70	94	83
48	90+	78+	71	97	90
49	90+	78+	71	97	90
50	90+	78+	71	97	90
51	90+	78+	72	99	99
52	90+	78+	72	99	99
53	90+	78+	72	99	99
54	90+	78+	73	99	99
55	90+	78+	73	99	99
56	90+	78+	73	99	99

* This table enables you to convert Spring, 1986, Grade 3 DRP (PEP-R) scores into CAT-D scores. These converted scores can be used as posttest scores with Spring, 1985, Grade 2 CAT scores as pretest scores.

TABLE 2
READING

Conversion Table for Evaluating
1985-1986 Grade 4 Programs*

CAT D (Level 13)			DRP (PEP-R)		
Raw Score	Spr, Gr 3 Percentile Rank	NCE	Raw Score	Spr, Gr 3 Percentile Rank	NCE
0	1	1	0	1	1
1	1	1	0	1	1
2	1	1	0	1	1
3	1	1	0	1	1
4	1	1	0	1	1
5	1	1	1	1	1
6	1	1	1	1	1
7	1	1	2	1	1
8	1	1	2	1	1
9	1	1	3	1	1
10	1	1	3	1	1
11	1	1	4	1	1
12	1	1	4	1	1
13	1	1	5	1	1
14	1	1	5	1	1
15	1	1	6	1	1
16	1	1	6	1	1
17	1	1	7	1	1
18	1	1	7	1	1
19	2	7	8	1	1
20	2	7	8	1	1
21	3	10	9	1	1
22	4	13	10	1	1
23	5	15	10	1	1
24	5	15	11	6	17
25	6	17	11	6	17
26	7	19	12	9	22
27	8	20	12	9	22
28	9	22	13	10	23
29	10	23	13	10	23
30	11	24	14	13	26
31	12	25	14	13	26
32	14	27	15	15	28
33	15	28	15	15	28
34	16	29	16	17	30
35	17	30	16	17	30
36	18	31	17	18	31
37	20	32	17	18	31
38	20	32	18	20	32

TABLE 2
READING (Cont'd)

39	22	34	18	20	32
40	23	34	19	23	34
41	25	36	20	26	37
42	26	36	20	26	37
43	28	38	21	29	38
44	30	39	22	30	39
45	31	40	22	30	39
46	33	41	23	35	42
47	35	42	23	35	42
48	36	42	24	37	43
49	38	44	25	37	43
50	40	45	25	37	43
51	41	45	26	40	45
52	43	46	27	44	47
53	45	47	28	47	48
54	47	48	28	47	48
55	49	49	29	50	50
56	51	51	30	54	52
57	53	52	30	54	52
58	55	53	31	55	53
59	58	54	32	56	53
60	60	55	33	60	55
61	62	56	34	64	58
62	65	58	35	66	59
63	68	60	36	70	61
64	71	62	37	73	63
65	75	64	38	75	64
66	78	66	40	78	66
67	82	69	41	80	68
68	86	73	43	85	72
69	90	77	45	88	75
70	94	83	47	90+	78+
71	97	90	49	90+	78+
72	99	99	52	90+	78+
73	99	99	56	90+	78+

* This table enables you to convert Spring, 1985, Grade 3 CAT-D scores into DRP (PEP-R) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 4 DRP scores as posttest scores.

TABLE 3
READING

Conversion Table for Evaluating
1985-1986 Grade 5 Programs*

CAT D (Level 14)			DRP (PA-8)		
Raw Score	Spr, Gr 4 Percentile Rank	NCE	Raw Score	Spr, Gr 4 Percentile Rank	NCE
0	1	1	0	1	1
1	1	1	1	1	1
2	1	1	1	1	1
3	1	1	2	1	1
4	1	1	2	1	1
5	1	1	3	1	1
6	1	1	3	1	1
7	1	1	4	1	1
8	1	1	4	1	1
9	1	1	5	1	1
10	1	1	6	1	1
11	2	7	7	1	1
12	2	7	8	1	1
13	3	10	9	1	1
14	4	13	10	3	10
15	5	15	11	5	15
16	7	19	12	5	15
17	10	23	14	6	17
18	12	25	15	8	20
19	14	27	17	10	23
20	16	29	19	13	26
21	19	31	21	16	29
22	21	33	22	18	31
23	23	34	24	23	34
24	25	36	25	25	36
25	27	37	26	27	37
26	29	38	27	30	39
27	31	40	28	30	39
28	33	41	29	32	40
29	34	41	30	35	42
30	36	42	31	37	43
31	38	44	32	40	45
32	39	44	33	44	47
33	41	45	34	47	48
34	43	46	35	50	50
35	44	47	35	50	50
36	46	48	36	53	52
37	48	49	37	53	52
38	49	49	38	55	53

TABLE 3
READING (Cont'd)

39	51	51	38	55	53
40	52	51	39	58	54
41	54	52	40	61	56
42	56	53	40	61	56
43	57	54	41	63	57
44	59	55	42	68	60
45	60	55	42	68	60
46	62	56	43	71	62
47	64	58	44	73	63
48	65	58	44	73	63
49	67	59	45	75	64
50	68	60	46	79	67
51	70	61	46	79	67
52	72	62	47	81	69
53	73	63	48	84	71
54	75	64	48	84	71
55	77	66	49	85	72
56	78	66	49	85	72
57	80	68	50	88	75
58	82	69	51	90	77
59	84	71	51	90	77
60	86	73	52	90+	78+
61	88	75	52	90+	78+
62	90	77	53	90+	78+
63	92	80	53	90+	78+
64	93	81	54	90+	78+
65	95	85	54	90+	78+
66	97	90	55	90+	78+
67	98	93	55	90+	78+
68	99	99	56	90+	78+
69	99	99	56	90+	78+
70	99	99	56	90+	78+

* This table enables you to convert Spring, 1985, Grade 4 CAT-D scores into DRP (PA-8) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 5 DRP scores as posttest scores.

TABLE 4
READING

Conversion Table for Evaluating
1985-1986 Grade 6 Programs*

DRP (PEP-F)			CAT D (Level 16)		
Raw Score	Spr, Gr 6 Percentile Rank	NCE	Raw Score	Spr, Gr 6 Percentile Rank	NCE
0	1	1	0	1	1
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	4	1	1
5	1	1	5	1	1
6	1	1	6	1	1
7	1	1	7	1	1
8	1	1	8	1	1
9	1	1	9	1	1
10	1	1	10	1	1
11	1	1	11	1	1
12	2	7	12	2	7
13	2	7	13	2	7
14	2	7	14	3	10
15	2	7	15	4	13
16	3	10	15	4	13
17	3	10	16	5	15
18	3	10	17	6	17
19	4	13	17	6	17
20	4	13	18	7	19
21	5	15	18	7	19
22	5	15	19	8	20
23	6	17	20	10	23
24	7	19	20	10	23
25	8	20	21	11	24
26	8	20	21	11	24
27	9	22	22	13	26
28	11	24	23	15	28
29	12	25	23	15	28
30	14	27	24	17	30
31	14	27	24	17	30
32	16	29	25	19	32
33	18	31	26	21	33
34	21	33	26	21	33
35	21	33	27	23	34
36	23	34	28	25	36
37	25	36	29	27	37
38	25	36	29	27	37

TABLE 4
READING (Cont'd)

39	27	37	30	29	38
40	30	39	31	31	40
41	33	41	32	33	41
42	33	41	33	35	42
43	34	41	34	37	43
44	37	43	35	39	44
45	40	45	36	41	45
46	40	45	37	42	46
47	44	47	38	44	47
48	46	48	38	44	47
49	49	49	39	46	48
50	49	49	40	48	49
51	52	51	41	50	50
52	54	52	43	54	52
53	57	54	44	56	53
54	60	55	45	58	54
55	60	55	46	59	55
56	62	56	47	61	56
57	65	58	48	63	57
58	67	59	49	65	58
59	70	61	50	67	59
60	73	63	51	69	60
61	74	64	52	71	62
62	76	65	53	74	64
63	79	67	54	76	65
64	81	69	55	78	66
65	83	70	56	80	68
66	86	73	57	83	70
67	87	74	58	85	72
68	89	76	59	87	74
69	90+	78+	60	89	76
70	90+	78+	61	91	78
71	90+	78+	62	93	81
72	90+	78+	63	95	85
73	90+	78+	64	96	87
74	90+	78+	65	98	93
75	90+	78+	66	99	99
76	90+	78+	67	99	99
77	90+	78+	69	99	99

* This table enables you to convert Spring, 1986, Grade 6 DRP (PEP-F) scores into CAT-D scores. These converted scores can be used as posttest scores with Spring, 1985, Grade 5 CAT scores as pretest scores.

TABLE 5
READING

Conversion Table for Evaluating
1985-1986 Grade 7 Programs*

CAT D (Level 16)			DRP (PEP-E)		
Raw Score	Spr, Gr 6 Percentile Rank	NCE	Raw Score	Spr, Gr 6 Percentile Rank	NCE
0	1	1	0	1	1
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	4	1	1
5	1	1	5	1	1
6	1	1	6	1	1
7	1	1	7	1	1
8	1	1	7	1	1
9	1	1	8	1	1
10	1	1	8	1	1
11	1	1	9	1	1
12	2	7	11	2	7
13	2	7	12	2	7
14	3	10	13	2	7
15	4	13	14	2	7
16	5	15	16	3	10
17	6	17	17	3	10
18	7	19	19	4	13
19	8	20	21	5	15
20	10	23	23	6	17
21	11	24	25	8	20
22	13	26	27	11	24
23	15	28	29	12	25
24	17	30	30	14	27
25	19	32	32	16	29
26	21	33	33	18	31
27	23	34	35	21	33
28	25	36	36	23	34
29	27	37	37	25	36
30	29	38	39	27	37
31	31	40	40	30	39
32	33	41	41	33	41
33	35	42	42	33	41
34	37	43	43	34	41
35	39	44	44	37	43
36	41	45	45	40	45
37	42	46	46	40	45
38	44	47	47	44	47
39	46	48	48	46	48

TABLE 5
READING (Cont'd)

40	48	49	49	49	49
41	50	50	50	49	49
42	52	51	51	52	51
43	54	52	52	54	52
44	56	53	53	57	54
45	58	54	54	57	54
46	59	55	55	60	55
47	61	56	56	62	56
48	63	57	57	65	58
49	65	58	58	67	59
50	67	59	59	70	61
51	69	60	60	73	63
52	71	62	61	74	64
53	74	64	62	76	65
54	76	65	63	79	67
55	78	66	64	81	69
56	80	68	65	83	70
57	83	70	66	84	71
58	85	72	67	87	74
59	87	74	68	89	76
60	89	76	69	90+	78+
61	91	78	70	90+	78+
62	93	81	71	90+	78+
63	95	85	72	90+	78+
64	96	87	73	90+	78+
65	98	93	74	90+	78+
66	99	99	75	90+	78+
67	99	99	76	90+	78+
68	99	99	76	90+	78+
69	99	99	77	90+	78+
70	99	99	77	90+	78+

* This table enables you to convert Spring, 1985, Grade 6 CAT-D scores into DRP (PEP-E) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 7 DRP scores as posttest scores.

TABLE 6
READING

Conversion Table for Evaluating
1985-1986 Grade 8 Programs*

CAT D (Level 17)			DRP (PA-4)		
Raw Score	Spr, Gr 7 Percentile Rank	NCE	Raw Score	Spr, Gr 7 Percentile Rank	NCE
0	1	1	0	1	1
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	3	1	1
5	1	1	4	1	1
6	1	1	5	1	1
7	1	1	6	1	1
8	1	1	7	1	1
9	1	1	7	1	1
10	1	1	8	1	1
11	1	1	9	1	1
12	2	7	10	1	1
13	2	7	11	1	1
14	3	10	12	2	7
15	4	13	14	2	7
16	5	15	15	3	10
17	7	19	17	4	13
18	8	20	18	5	15
19	11	24	20	7	19
20	13	26	22	10	23
21	15	28	24	11	24
22	17	30	26	14	27
23	20	32	28	15	28
24	22	34	30	19	32
25	25	36	32	21	33
26	27	37	34	25	36
27	29	38	35	27	37
28	32	40	37	30	39
29	34	41	38	32	40
30	37	43	40	34	41
31	39	44	41	37	43
32	41	45	42	39	44
33	43	46	43	39	44
34	45	47	44	43	46
35	47	48	45	46	48
36	49	49	47	48	49
37	51	51	48	50	50
38	53	52	49	52	51

TABLE 6
READING (Cont'd)

39	55	53	50	54	52
40	57	54	51	57	54
41	59	55	52	57	54
42	60	55	53	58	54
43	63	57	54	61	56
44	65	58	55	63	57
45	67	59	56	66	59
46	68	60	57	68	60
47	70	61	58	70	61
48	72	62	59	72	62
49	74	64	60	74	64
50	76	65	61	75	64
51	78	66	61	75	64
52	79	67	62	77	66
53	81	68	63	79	67
54	83	70	64	80	68
55	85	72	65	82	69
56	87	74	66	85	72
57	89	76	66	85	72
58	90	77	67	86	73
59	92	80	68	89	76
60	94	83	69	90	77
61	95	85	70	90+	78+
62	96	87	71	90+	78+
63	97	90	72	90+	78+
64	98	93	73	90+	78+
65	99	99	74	90+	78+
66	99	99	74	90+	78+
67	99	99	75	90+	78+
68	99	99	76	90+	78+
69	99	99	77	90+	78+
70	99	99	77	90+	78+

* This table enables you to convert Spring, 1985, Grade 7 CAT-D scores into DRP (PA-4) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 8 DRP scores as posttest scores.

TABLE 7
READING

Conversion Table for Evaluating
1985-1986 Grade 9 Junior High Programs*

CAT D (Level 18)			DRP (PCT-C)		
Raw Score	Spr, Gr 8 Percentile Rank	NCE	Raw Score	Spr, Gr 8 Percentile Rank	NCE
0	1	1	0	1	1
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	4	1	1
5	1	1	5	1	1
6	1	1	6	1	1
7	1	1	7	1	1
8	1	1	8	1	1
9	1	1	8	1	1
10	1	1	9	1	1
11	1	1	10	1	1
12	1	1	10	1	1
13	1	1	11	1	1
14	2	7	12	1	1
15	3	10	14	1	1
16	4	13	16	2	7
17	5	15	18	2	7
18	6	17	21	4	13
19	8	20	24	6	16
20	10	23	26	8	20
21	12	25	28	9	22
22	14	27	31	11	24
23	16	29	33	13	26
24	18	31	34	15	28
25	20	32	36	16	29
26	22	34	38	20	32
27	24	35	39	22	34
28	26	36	40	24	35
29	28	38	42	26	37
30	30	39	43	29	38
31	31	40	44	31	40
32	34	41	45	33	41
33	35	42	46	33	41
34	37	43	47	35	42
35	39	44	48	39	44
36	41	45	49	41	45
37	43	46	50	43	46
38	45	47	51	43	46

TABLE 7
READING (Cont'd)

39	47	48	52	46	48
40	49	49	53	48	49
41	50	50	54	50	50
42	52	51	55	52	51
43	54	52	56	55	53
44	56	53	57	58	54
45	58	54	58	60	55
46	60	55	58	60	55
47	62	56	59	62	56
48	64	58	60	64	58
49	66	59	61	67	59
50	68	60	62	68	60
51	69	60	63	70	61
52	72	62	64	72	62
53	73	63	64	72	62
54	75	64	65	74	64
55	77	66	66	77	66
56	79	67	67	80	68
57	81	68	68	82	69
58	83	70	68	82	69
59	85	72	69	84	71
60	87	74	70	86	73
61	89	76	71	88	75
62	91	78	71	88	75
63	93	81	72	90+	78+
64	94	83	73	90+	78+
65	96	87	74	90+	78+
66	97	90	74	90+	78+
67	98	93	75	90+	78+
68	99	99	76	90+	78+
69	99	99	77	90+	78+
70	99	99	77	90+	78+

* This table enables you to convert Spring, 1985, Grade 8 CAT-D scores into DRP (PCT-C) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 9 DRP scores as posttest scores.

TABLE 1
MATHEMATICS

Conversion Table for Evaluating
1985-1986 Grade 3 Programs*

NYCMT (Level 2)			Metropolitan Achievement Test (Pri 2)		
Raw Score	Spr, Gr 2 Percentile Rank	NCE	Raw Score	Spr, Gr 2 Percentile Rank	NCE
1	1	1	1	1	1
2	1	1	1	1	1
3	1	1	1	1	1
4	1	1	2	1	1
5	1	1	2	1	1
6	1	1	2	1	1
7	1	1	2	1	1
8	1	1	3	1	1
9	1	1	3	1	1
10	1	1	4	1	1
11	1	1	4	1	1
12	1	1	5	1	1
13	1	1	5	1	1
14	1	1	6	1	1
15	1	1	6	1	1
16	1	1	7	1	1
17	1	1	7	1	1
18	1	1	8	1	1
19	1	1	8	1	1
20	2	7	9	1	1
21	2	7	9	1	1
22	2	7	10	1	1
23	2	7	10	1	1
24	2	7	11	1	1
25	2	7	12	1	1
26	2	7	12	1	1
27	2	7	13	1	1
28	3	10	14	1	1
29	3	10	14	1	1
30	3	10	15	1	1
31	3	10	15	1	1
32	3	10	16	1	1
33	5	15	17	1	1
34	5	15	17	1	1
35	6	17	18	1	1
36	7	19	19	1	1
37	8	20	19	1	1
38	9	22	20	1	1

TABLE 1
MATHEMATICS (Cont'd)

39	10	23	21	1	1
40	11	24	21	1	1
41	12	25	22	1	1
42	13	26	23	1	1
43	14	27	24	2	7
44	14	27	24	2	7
45	16	29	25	2	7
46	17	30	26	2	7
47	18	31	27	3	10
48	19	32	28	3	10
49	19	32	29	4	13
50	21	33	29	4	13
51	22	34	30	5	15
52	23	34	31	5	15
53	26	36	32	6	17
54	27	37	32	6	17
55	28	38	33	7	19
56	29	38	34	8	20
57	31	40	35	9	22
58	33	41	36	10	23
59	34	41	37	11	24
60	36	42	38	13	26
61	38	44	39	14	27
62	40	45	40	16	29
63	42	46	41	17	30
64	44	47	42	19	32
65	46	48	43	21	33
66	47	48	44	23	34
67	49	49	45	25	36
68	50	50	46	28	38
69	52	51	47	30	39
70	54	52	48	32	40
71	57	54	49	35	42
72	60	55	50	37	43
73	62	56	51	40	45
74	64	58	52	43	46
75	66	59	54	48	49
76	68	60	55	52	51
77	70	61	56	54	52
78	73	63	57	57	54
79	75	64	58	61	56
80	77	66	60	66	59
81	79	67	61	69	60
82	82	69	63	75	64
83	84	71	64	78	66
84	87	74	65	81	68
85	89	76	67	85	72
86	92	80	68	88	75
87	94	83	70	92	80
88	95	85	72	95	85
89	96	87	74	97	90

TABLE 1
MATHEMATICS (Cont'd)

90	97	90	76	99	99
91	98	93	78	99	99
92	99	99	81	99	99
93	99	99	82	99	99

* This table enables you to convert 1985 NYCMT (Level 2) scores into MAT (Pri 2) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 3 MAT scores as posttest scores.

TABLE 2
MATHEMATICS

Conversion Table for Evaluating
1985-1986 Grade 4 Programs*

NYCMT (Level 3)			Metropolitan Achievement Test (Elem)		
Raw Score	Spr, Gr 3 Percentile Rank	NCE	Raw Score	Spr, Gr 3 Percentile Rank	NCE
1	1	1	1	1	1
2	2	7	1	1	1
3	2	7	2	1	1
4	2	7	2	1	1
5	2	7	3	1	1
6	2	7	3	1	1
7	2	7	4	1	1
8	3	10	4	1	1
9	3	10	5	1	1
10	3	10	5	1	1
11	3	10	6	1	1
12	3	10	6	1	1
13	3	10	7	1	1
14	3	10	8	1	1
15	4	13	8	1	1
16	4	13	9	1	1
17	5	15	10	1	1
18	5	15	10	1	1
19	6	17	11	1	1
20	6	17	12	1	1
21	6	17	12	1	1
22	7	19	13	1	1
23	8	20	13	1	1
24	8	20	14	1	1
25	9	22	15	1	1
26	10	23	15	1	1
27	11	24	16	1	1
28	11	24	16	1	1
29	12	25	17	1	1
30	14	27	17	1	1
31	14	27	18	1	1
32	15	28	19	1	1
33	16	29	19	1	1
34	18	31	20	1	1
35	18	31	21	1	1
36	19	32	22	1	1
37	20	32	22	1	1
38	22	34	22	1	1
39	22	34	23	1	1
40	24	35	24	2	7

TABLE 2
MATHEMATICS (Cont'd)

41	25	36	25	2	7
42	26	36	26	2	7
43	28	38	26	2	7
44	28	38	27	3	10
45	30	39	28	3	10
46	32	40	29	4	13
47	32	40	29	4	13
48	34	41	30	4	13
49	35	42	30	4	13
50	36	42	31	5	15
51	38	44	32	6	17
52	40	45	32	6	17
53	41	45	33	7	19
54	42	46	34	8	20
55	43	46	35	9	22
56	44	47	35	9	22
57	46	48	36	10	23
58	47	48	37	11	24
59	49	49	37	11	24
60	50	50	38	13	26
61	53	52	39	14	27
62	53	52	40	15	28
63	55	53	40	15	28
64	56	53	41	17	30
65	58	54	42	18	31
66	58	54	43	20	32
67	60	55	44	21	33
68	60	55	44	21	33
69	63	57	45	23	34
70	63	57	46	25	36
71	64	58	47	27	37
72	66	59	48	29	38
73	66	59	48	29	38
74	67	59	49	31	40
75	68	60	50	33	41
76	69	60	51	36	42
77	70	61	52	38	44
78	71	62	53	40	45
79	72	62	54	43	46
80	74	64	55	45	47
81	75	64	55	45	47
82	77	66	56	47	48
83	77	66	57	50	50
84	78	66	58	52	51
85	79	67	59	54	52
86	81	68	60	57	54
87	82	69	61	59	55
88	83	70	62	63	57
89	83	70	63	65	58
90	84	71	64	67	59

TABLE 2
MATHEMATICS (Cont'd)

91	85	72	65	69	60
92	87	74	66	71	62
93	88	75	67	74	64
94	89	76	68	76	65
95	90	77	69	78	66
96	90	77	70	81	68
97	91	78	71	82	69
98	92	80	72	85	72
99	93	81	73	87	74
100	94	83	75	89	76
101	94	83	76	91	78
102	96	87	77	93	81
103	96	87	78	94	83
104	97	90	79	95	85
105	98	93	80	96	87
106	98	93	82	97	90
107	98	93	83	98	93
108	99	99	85	99	99
109	99	99	86	99	99
110	99	99	88	99	99
111	99	99	90	99	99
112	99	99	92	99	99
113	99	99	93	99	99
114	99	99	94	99	99

* This table enables you to convert 1985 NYCMT (Level 3) scores into MAT (Elem) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 4 MAT scores as posttest scores.

TABLE 3
MATHEMATICS

Conversion Table for Evaluating
1985-1986 Grade 5 Programs*

NYCMT (Level 4)			Metropolitan Achievement Test (Elem)		
Raw Score	Spr, Gr 4 Percentile Rank	NCE	Raw Score	Spr, Gr 4 Percentile Rank	NCE
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	3	1	1
5	1	1	4	1	1
6	1	1	5	1	1
7	1	1	6	1	1
8	1	1	7	1	1
9	1	1	7	1	1
10	1	1	8	1	1
11	1	1	9	1	1
12	1	1	10	1	1
13	1	1	11	1	1
14	1	1	11	1	1
15	2	7	12	1	1
16	2	7	13	1	1
17	2	7	14	1	1
18	2	7	14	1	1
19	2	7	15	1	1
20	2	7	16	1	1
21	3	10	17	1	1
22	3	10	18	1	1
23	3	10	18	1	1
24	4	13	19	1	1
25	5	15	20	1	1
26	5	15	21	1	1
27	5	15	22	1	1
28	6	17	22	1	1
29	6	17	23	1	1
30	7	19	24	1	1
31	7	19	25	1	1
32	8	20	25	1	1
33	8	20	26	1	1
34	9	22	27	1	1
35	10	23	27	1	1
36	11	24	28	2	7
37	11	24	29	2	7
38	12	25	30	2	7
39	12	25	31	3	10

TABLE 3
MATHEMATICS (Cont'd)

40	13	26	31	3	10
41	14	27	32	3	10
42	15	28	33	3	10
43	15	28	34	4	13
44	16	29	34	4	13
45	18	31	35	4	13
46	18	31	36	5	15
47	19	32	36	5	15
48	20	32	37	5	15
49	21	33	38	6	17
50	22	34	39	7	19
51	23	34	39	7	19
52	24	35	40	7	19
53	25	36	41	8	20
54	26	36	42	9	22
55	27	37	42	9	22
56	28	38	43	10	23
57	30	39	44	11	24
58	30	39	44	11	24
59	32	40	45	12	25
60	33	41	46	13	26
61	35	42	47	14	27
62	35	42	47	14	27
63	36	42	48	15	28
64	36	42	49	16	29
65	39	44	50	18	31
66	39	44	51	19	32
67	41	45	52	21	33
68	42	46	53	22	34
69	43	46	53	22	34
70	44	47	54	24	35
71	44	47	55	25	36
72	46	48	56	27	37
73	48	49	57	29	38
74	50	50	57	29	38
75	51	51	58	31	40
76	52	51	59	32	40
77	54	52	60	34	41
78	55	53	61	36	42
79	56	53	62	39	44
80	58	54	62	39	44
81	59	55	63	41	45
82	61	56	64	43	46
83	62	56	65	45	47
84	64	58	66	47	48
85	65	58	67	51	51
86	67	59	68	53	52
87	69	60	69	55	53
88	70	61	69	55	53
89	73	63	70	58	54

TABLE 3
MATHEMATICS (Cont'd)

90	74	64	71	60	55
91	75	64	72	63	57
92	77	66	73	66	59
93	79	67	74	68	60
94	81	68	75	70	61
95	82	69	76	73	63
96	84	71	77	75	64
97	86	73	78	78	66
98	87	74	79	80	68
99	89	76	80	82	69
100	91	78	81	85	72
101	93	81	82	87	74
102	93	81	83	89	76
103	95	85	84	91	78
104	96	87	85	93	81
105	97	90	86	94	83
106	97	90	88	97	90
107	98	93	89	98	93
108	99	99	90	99	99
109	99	99	91	99	99
110	99	99	92	99	99
111	99	99	94	99	99
112	99	99	95	99	99

* This table enables you to convert 1985 NYCMT (Level 4) scores into MAT (Elem) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 5 MAT scores as posttest scores.

TABLE 4
MATHEMATICS

Conversion Table for Evaluating
1985-1986 Grade 6 Programs*

NYCMT (Level 5)			Metropolitan Achievement Test (Intermediate)		
Raw Score	Spr, Gr 5 Percentile Rank	NCE	Raw Score	Spr, Gr 5 Percentile Rank	NCE
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	4	1	1
5	1	1	5	1	1
6	1	1	6	1	1
7	1	1	7	1	1
8	1	1	8	1	1
9	1	1	9	1	1
10	1	1	10	1	1
11	1	1	11	1	1
12	1	1	11	1	1
13	1	1	12	1	1
14	1	1	13	1	1
15	2	7	14	1	1
16	2	7	15	1	1
17	2	7	16	1	1
18	3	10	16	1	1
19	3	10	17	1	1
20	4	13	18	1	1
21	4	13	19	1	1
22	5	15	20	1	1
23	5	15	21	1	1
24	6	17	22	1	1
25	6	17	22	1	1
26	6	17	23	1	1
27	7	19	24	2	7
28	8	20	24	2	7
29	9	22	25	2	7
30	10	23	26	2	7
31	11	24	27	3	10
32	12	25	28	3	10
33	12	25	29	3	10
34	13	26	29	3	10
35	14	27	30	4	13
36	15	28	31	5	15
37	16	29	31	5	15
38	17	30	32	5	15
39	18	31	33	6	17

TABLE 4
MATHEMATICS (Cont'd)

40	19	32	34	7	19
41	19	32	35	8	20
42	20	32	35	8	20
43	21	33	36	8	20
44	23	34	37	9	22
45	24	35	38	10	23
46	25	36	39	12	25
47	26	36	39	12	25
48	27	37	40	13	26
49	29	38	40	13	26
50	29	38	41	14	27
51	31	40	42	15	28
52	32	40	43	17	30
53	34	41	43	17	30
54	35	42	44	18	31
55	37	43	45	20	32
56	38	44	46	21	33
57	40	45	47	23	34
58	43	46	47	23	34
59	43	46	48	25	36
60	45	47	48	25	36
61	47	48	49	27	37
62	48	49	50	29	38
63	50	50	51	31	40
64	52	51	51	31	40
65	54	52	52	33	41
66	55	53	53	35	42
67	57	54	54	37	43
68	59	55	55	39	44
69	60	55	55	39	44
70	60	55	56	41	45
71	62	56	57	43	46
72	63	57	58	46	48
73	64	58	58	46	48
74	64	58	59	48	49
75	64	58	60	50	50
76	67	59	61	53	52
77	68	60	61	53	52
78	70	61	62	55	53
79	71	62	63	58	54
80	72	62	64	60	55
81	74	64	64	60	55
82	75	64	65	63	57
83	77	66	66	65	58
84	78	66	67	67	59
85	79	67	68	70	61
86	80	68	68	70	61
87	82	69	69	72	62
88	83	70	70	75	64
89	84	71	70	75	64

TABLE 4
MATHEMATICS (Cont'd)

90	85	72	71	78	66
91	87	74	72	79	67
92	88	75	73	82	69
93	89	76	74	84	71
94	90	77	74	84	71
95	91	78	75	86	73
96	92	80	76	88	75
97	93	81	77	89	76
98	94	83	78	91	78
99	94	83	78	91	78
100	96	87	79	92	80
101	96	87	80	94	83
102	97	90	81	95	85
103	98	93	82	96	87
104	98	93	83	97	90
105	98	93	83	97	90
106	99	99	84	98	93
107	99	99	85	98	93
108	99	99	86	99	99
109	99	99	87	99	99
110	99	99	88	99	99
111	99	99	89	99	99
112	99	99	90	99	99
113	99	99	91	99	99
114	99	99	92	99	99
115	99	99	93	99	99
116	99	99	94	99	99
117	99	99	95	99	99

* This table enables you to convert 1985 NYCMT (Level 5) scores into MAT (Intermediate) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 6 MAT scores as posttest scores.

TABLE 5
MATHEMATICS

Conversion Table for Evaluating
1985-1986 Grade 7 Programs*

NYCMT (Level 6)			Metropolitan Achievement Test (Intermediate)		
Raw Score	Spr, Gr 6 Percentile Rank	NCE	Raw Score	Spr, Gr 6 Percentile Rank	NCE
1	1	1	1	1	1
2	1	1	3	1	1
3	1	1	4	1	1
4	1	1	5	1	1
5	1	1	6	1	1
6	1	1	8	1	1
7	1	1	9	1	1
8	1	1	10	1	1
9	1	1	11	1	1
10	1	1	12	1	1
11	1	1	13	1	1
12	1	1	14	1	1
13	1	1	15	1	1
14	1	1	16	1	1
15	2	7	17	1	1
16	2	7	18	1	1
17	3	10	19	1	1
18	3	10	20	1	1
19	4	13	21	1	1
20	4	13	22	1	1
21	4	13	23	1	1
22	5	15	24	1	1
23	5	15	25	1	1
24	6	17	26	1	1
25	6	17	27	1	1
26	7	19	27	1	1
27	7	19	28	1	1
28	8	20	29	2	7
29	8	20	30	2	7
30	9	22	31	2	7
31	10	23	32	3	10
32	11	24	33	3	10
33	12	25	34	3	10
34	12	25	34	3	10
35	13	26	35	4	13
36	13	26	36	4	13
37	14	27	37	5	15
38	16	29	38	5	15
39	17	30	39	6	17

TABLE 5
MATHEMATICS (Cont'd)

40	17	30	39	6	17
41	17	30	40	7	19
42	19	32	41	7	19
43	19	32	41	7	19
44	20	32	42	8	20
45	22	34	43	9	22
46	23	34	44	10	23
47	24	35	44	10	23
48	25	36	45	11	24
49	26	36	46	12	25
50	27	37	47	13	26
51	29	38	48	14	27
52	30	39	48	14	27
53	32	40	49	16	29
54	33	41	50	17	30
55	34	41	51	19	32
56	36	42	51	19	32
57	37	43	52	20	32
58	38	44	53	22	34
59	40	45	53	22	34
60	42	46	54	23	34
61	43	46	55	25	36
62	43	46	56	27	37
63	45	47	56	27	37
64	45	47	57	29	38
65	45	47	58	31	40
66	46	48	59	33	41
67	47	48	59	33	41
68	48	49	60	35	42
69	50	50	61	38	44
70	52	51	61	38	44
71	54	52	62	40	45
72	54	52	63	42	46
73	56	53	64	44	47
74	58	54	64	44	47
75	59	55	65	47	48
76	61	56	66	49	49
77	62	56	66	49	49
78	64	58	67	51	51
79	65	58	68	54	52
80	66	59	68	54	52
81	67	59	69	57	54
82	70	61	70	60	55
83	71	62	71	63	57
84	73	63	71	63	57
85	75	64	72	65	58
86	76	65	73	68	60
87	77	66	73	68	60
88	79	67	74	71	62
89	80	68	75	74	64

TABLE 5
MATHEMATICS (Cont'd)

90	82	69	75	74	64
91	83	70	76	76	65
92	84	71	77	79	67
93	85	72	78	81	68
94	86	73	78	81	68
95	87	74	79	83	70
96	89	76	80	85	72
97	90	77	80	85	72
98	91	78	81	87	74
99	92	80	82	89	76
100	94	83	83	91	78
101	95	85	83	91	78
102	95	85	84	93	81
103	96	87	85	94	83
104	97	90	86	96	87
105	98	93	86	96	87
106	98	93	87	97	90
107	98	93	88	98	93
108	99	99	88	98	93
109	99	99	89	99	99
110	99	99	90	99	99
111	99	99	91	99	99
112	99	99	92	99	99
113	99	99	92	99	99
114	99	99	93	99	99
115	99	99	94	99	99
116	99	99	95	99	99

* This table enables you to convert 1985 NYCMT (Level 6) scores into MAT (Intermediate) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 7 MAT scores as posttest scores.

TABLE 6
MATHEMATICS

Conversion Table for Evaluating
1985-1986 Grade 8 Programs*

NYCMT (Level 7)			Metropolitan Achievement Test (Advanced I)		
Raw Score	Spr, Gr 7 Percentile Rank	NCE	Raw Score	Spr, Gr 7 Percentile Rank	NCE
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	3	1	1
5	1	1	4	1	1
6	1	1	5	1	1
7	1	1	6	1	1
8	1	1	7	1	1
9	1	1	7	1	1
10	1	1	8	1	1
11	1	1	9	1	1
12	1	1	10	1	1
13	1	1	11	1	1
14	1	1	12	1	1
15	2	7	12	1	1
16	2	7	13	1	1
17	2	7	14	1	1
18	2	7	15	1	1
19	2	7	16	1	1
20	2	7	17	1	1
21	2	7	17	1	1
22	2	7	18	1	1
23	3	10	19	1	1
24	3	10	20	1	1
25	3	10	21	2	7
26	5	15	22	2	7
27	5	15	22	2	7
28	6	17	23	2	7
29	6	17	24	3	10
30	7	19	25	3	10
31	7	19	26	3	10
32	8	20	26	3	10
33	9	22	27	4	13
34	9	22	28	5	15
35	10	23	29	5	15
36	12	25	30	6	17
37	12	25	30	6	17
38	13	26	31	7	19

TABLE 6
MATHEMATICS (Cont'd)

39	14	27	32	7	19
40	15	28	33	8	20
41	16	29	33	8	20
42	18	31	34	9	22
43	20	32	35	10	23
44	21	33	36	11	24
45	22	34	37	12	25
46	23	34	37	12	25
47	25	36	38	13	26
48	26	36	39	14	27
49	28	38	40	15	28
50	30	39	41	16	29
51	31	40	41	16	29
52	33	41	42	18	31
53	34	41	43	19	32
54	36	42	44	20	32
55	38	44	45	21	33
56	39	44	46	23	34
57	41	45	46	23	34
58	43	46	47	25	36
59	44	47	48	26	36
60	46	48	49	28	38
61	48	49	49	28	38
62	49	49	50	30	39
63	50	50	51	32	40
64	52	51	52	34	41
65	53	52	52	34	41
66	55	53	54	37	43
67	57	54	55	39	44
68	58	54	55	39	44
69	60	55	56	41	45
70	61	56	57	44	47
71	62	56	58	46	48
72	64	58	58	46	48
73	65	58	59	48	49
74	66	59	60	50	50
75	67	59	61	52	51
76	69	60	62	54	52
77	71	62	62	54	52
78	71	62	63	56	53
79	73	63	64	59	55
80	75	64	65	61	56
81	76	65	66	64	58
82	77	66	66	64	58
83	78	66	67	66	59
84	79	67	68	68	60
85	80	68	69	70	61
86	81	68	70	73	63
87	83	70	70	73	63
88	84	71	71	75	64

TABLE 6
MATHEMATICS (Cont'd)

89	85	72	72	76	65
90	86	73	73	78	66
91	87	74	74	80	68
92	87	74	75	82	69
93	88	75	76	84	71
94	89	76	76	84	71
95	89	76	77	85	72
96	90	77	78	87	74
97	91	78	79	89	76
98	92	80	80	91	78
99	93	81	80	91	78
100	94	83	81	92	80
101	94	83	82	93	81
102	96	87	83	94	83
103	96	87	84	95	85
104	96	87	85	96	87
105	97	90	85	96	87
106	97	90	86	97	90
107	97	90	87	98	93
108	97	90	88	99	99
109	98	93	89	99	99
110	98	93	90	99	99
111	99	99	90	99	99
112	99	99	91	99	99
113	99	99	92	99	99
114	99	99	93	99	99
115	99	99	93	99	99
116	99	99	94	99	99
117	99	99	95	99	99

* This table enables you to convert 1985 NYCMT (Level 7) scores into MAT (Advanced I) scores. These converted scores can be used as pretest scores with Spring, 1986, Grade 8 MAT scores as posttest scores.

TABLE 7
MATHEMATICS

Conversion Table
for Evaluating 1985-1986
Grade 9 Junior High Programs*

RCT	NYCMT (Level 9)		
Raw Score	Raw Score	Spr, Gr 9 Percentile Rank	NCE
0	0	1	1
1	3	1	1
2	6	1	1
3	12	1	1
4	15	1	1
5	17	1	1
6	18	1	1
7	19	1	1
8	20	1	1
9	21	1	1
10	22	1	1
11	24	1	1
12	26	1	1
13	27	1	1
14	29	1	1
15	32	1	1
16	34	1	1
17	36	2	7
18	38	2	7
19	40	3	10
20	42	4	13
21	44	5	15
22	45	6	17
23	46	6	17
24	48	7	19
25	50	8	20
26	52	10	23
27	54	11	24
28	55	12	25
29	57	14	27
30	59	16	29
31	60	16	29
32	62	18	31
33	63	19	32
34	65	21	33
35	67	23	34
36	69	25	36

TABLE 7
MATHEMATICS (Cont'd)

37	70	26	37
38	71	27	37
39	73	29	38
40	75	31	40
41	77	33	41
42	79	36	43
43	81	39	44
44	83	43	46
45	85	46	48
46	86	47	48
47	88	50	50
48	90	53	52
49	92	56	53
50	93	58	54
51	95	61	56
52	97	65	58
53	100	71	62
54	102	76	65
55	104	79	67
56	106	83	70
57	108	86	73
58	110	89	76
59	113	95	85
60	115	98	93

* This table enables you to convert 1986 RCT (Math) scores into NYCMT (Level 9) scores. These converted scores can be used as posttest scores with Spring, 1985, Grade 8 NYCMT scores as pretest scores.